# STEUBENVILLE.

SKETCH OF

MANUFACTURING,

# Educational and other Institutions.

ITS ADVANTAGES FOR

## BUSINESS OR RESIDENCE.

PUBLISHED BY DIRECTION OF THE CITY COUNCIL.

ALBERT F. MATLACK, -
R. L. BROWNLEE, - - } *Committee.*
GEO. W. ALBAN. - - -

COMPILED BY

JOSEPH B. DOYLE.

STEUBENVILLE:
PRINTED AT STEUBENVILLE HERALD BOOK AND JOB PRINTING HOUSE,
1879.

# City Officers for 1879.

| | |
|---|---|
| JOHN IRWIN, | Mayor. |
| DOUGLAS W. CAHILL, | Marshal. |
| A. H. BATTIN, | Solicitor. |
| DAVID HULL, | Commissioner. |
| GEO. E. HARPER, | Clerk. |
| J. M. BARCLAY, | Civil Engineer. |
| GEORGE O'NEAL, | Wharfmaster. |

# Councilmen.

| | | |
|---|---|---|
| JONES MUNKER, | | President. |
| ALBERT F. MATLACK, | | President pro tem. |
| JOSEPH BEATTY, | B. N. LINDSEY, | First Ward. |
| W. D LEWIS, | G. W. ALBAN, | Second " |
| GEO. L. CONN, | R. L. BROWNLEE, | Third " |
| H. G. GARRETT, | JONES MUNKER, | Fourth " |
| A. F. MATLACK, | CHARLES MOODEY, | Fifth " |
| GEO SMITH, | HENRY OPPERMAN, | Sixth " |

# Water Works Trustees.

C. B. DOTY, W. H HARDEN,
JOSEPH ANDERSON.

# Fire Department.

CHARLES R. THOMPSON, - - - - Chief.
V. W. BERRY, THOMAS STERLING.

# Board of Education.

CHARLES SPAULDING, - - - - President.
W. R. PETERS, JOHN S. PATTERSON,
A. M. BLACKBURN, JOHN S. MAXWELL,
J. H. DAWSON.

# CONTENTS

# PREFACE.

This little pamphlet is published for the purpose of presenting in compact and convenient form a general view of our manufactories and institutions, together with the advantages of Steubenville as a place for business or residence. Much more could doubtless have been added, and it may be that in the limited space at command, some things may have been omitted which should have been inserted, but we trust that enough is shown to demonstrate that our city cannot be easily excelled in advantages of position for any purpose.

# MEMORANDA.

Following is a list of institutions in the city, which has been crowded from its proper place in the body of the work, giving the names, date of organization and present number of members:

| | Organized. | Members |
|---|---|---|
| Commandery No. 11, Knights Templar, | 1850, | 116 |
| Union Council No. 2, R. & S. M., | 1866, | 30 |
| Union Chapter, No. 15, R. A. M., | 1827, | 65 |
| Steubenville Lodge, No. 45, F. & A. M., | 1820, | 70 |
| Meridian Lodge, No. 234, " | 1854, | 65 |
| Freemasons' Mutual Benefit Association, | 1871, | 138 |
| Nimrod Encampment, No. 3, I. O. O. F., | 1840, | 112 |
| Jefferson Lodge, No. 6, " | 1836, | 165 |
| Good Will Lodge, No. 143, " | 1850, | 103 |
| Golden Rule Lodge, No. 64, Degree of Rebecca, | 1874, | 86 |
| Steuben Lodge, No. 1, Knights of Pythias, | 1869, | 160 |
| Eureka Lodge, No. 35, " " | 1871, | 50 |
| Ivanhoe Division U. R. " " | 1878, | 40 |
| Steubenville Grove, No. 25, U. A. O. D., | 1870, | 60 |
| A. P. A., Zion Lodge, No. 16, | 1870, | 70 |
| American Star Council, No. 7, O. U. A. M., | 1869, | 50 |
| Temple of Honor, Logan Council, No. 2, | 1853, | 21 |
| Republican Temple of Honor, No. 24, | 1848, | 30 |
| Steuben Social Temple, No. 7, | 1851, | 55 |
| Steubenville Turnverein, | 1874, | 41 |
| Chandler Lodge, No. 857, K. of H., | 1878, | 56 |
| Stanton Council, No. 343, Royal Arcanum, | 1879, | 23 |
| St. Patrick's Society, | | |
| Ancient Order of Hibernians, | | |
| Branch No. 2, Emerald Association, | 1873, | 25 |
| Philharmonic Society, | 1868, | 50 |
| Harmonic Society, | 1866, | 18 |
| Lecture and Library Club, | 1879, | |
| Female Bible Society, | 1818, | |

The Sunday Local should be added to the list of newspapers on page 8, making eight the present number in the city, with a ninth, the Ohio Press, by W. R. Allison, in prospect.

On page 39 for May 20, read May 13.

On page 41 for "Union Seminary," read Union Cemetery.

# INTRODUCTORY.

On the right bank of the upper Ohio, sixty-eight miles by water below Pittsburgh, and four hundred above Cincinnati, surrounded by tall hills partly covered by the primeval forest and partly cleared for cultivation, stands the city of Steubenville. It lies in 40° 25′ north latitude and 3° 40′ west longitude from Washington. The water in the Ohio river at this point is about 1,000 feet in width from shore to shore at average height, and at low water mark is 640½ feet above the sea. The Cleveland & Pittsburgh railroad, running through the city is 90 feet above Lake Erie at the foot of Market street, and the Pittsburgh, Cincinnati & St. Louis Railway is 155 feet above the lake, at its intersection with Washington street, high enough to secure cooling breezes in summer, without the accompaniment of too rigorous cold in winter. The corporation proper presents a frontage on the river of about three miles with an average width of something less than a mile, including within its boundaries 1,676 acres.

Steubenville is one of the earliest settled points in the State, and previous to presenting some of its advantages as a locality possessing more than ordinary advantages for sojourn, residence or business, a short historical sketch may not prove uninteresting.

When George Washington made his excursion down the Ohio in 1770, although settlements had already been made at the junction of the Ohio and Monongahela rivers, and in Western Pennsylvania, and at the breaking out of the revolution had reached the line of the upper Ohio on the south and east, and the line of the great lakes on the north, yet that conflict checked the tide of emigration so that it was not until long after that this fertile part of our National heritage was thrown open for settlement.

The first permanent location of any sort on the site of the present city was a blockhouse built by Captain Hamtramck, an officer of the United States army, which was constructed as a refuge and protection to the surveyors, who had begun laying off the country into sections and townships. The following year a wooden fort was erected, strong enough to withstand any of the enemies who were expected to move against it, and named after Baron Steuben, a Prussian Noble of revolutionary fame. The fort stood on the bank of the river, probably nearly, if not directly north of the present line of Adams street, and consisted of four block houses 28 feet square set at equal distances apart, and connected by a line of pickets 150 feet in length each way. After being in use a few months the garrison was removed to the mouth of the Muskingum, and in 1790 the abandoned fort was destroyed by fire.

We next hear of the place in connection with the purchase of the ground on which the town afterwards stood, by James Ross and Bezaleel Wells, in the fall of 1797. The original town lay along the bank of the river, and was bounded by North and South streets and Bank alley respectively. It consisted of 236 inlots 60x180 feet, with 20 outlots of five acres each, with suitable streets and alleys. The first lots were sold at public sale in February, 1798, and this really marked the beginning of the village. Plain houses were of course erected at first, the original brick chimney being constructed by John Ward in the following month. Work was begun that year on the Wells mansion, south of town, which was nearly two years in building, and at that time was the most pretentious dwelling in this part of the country. It is still standing, being known as the "Grove" property in the First Ward. The establishment of the United States land office, and the place being a central point, caused it from this time to grow quite rapidly. The following additional scraps of history are taken from a work published by the writer sometime since :

"It may be of interest here to know that the first white child born in Steubenville was James Hunter, son of Samuel Hunter, on the 18th day of September, 1798, and the next, John Ward, Jr., the next month. The latter has long since been gathered to his fathers, but the former is still living in Yuba county, California.

"The first Court was held here on the first Tuesday of November, 1797, and was organized under proclamation of Winthrop Sargent, acting-Governor of the Territory Northwest of the Ohio. The Judges were Philip Cable John Moody and George Humphries, and Bezaleel Wells prothonotary or clerk. On the first day day of the session John Wolfe, James Wallace and Solomon Sibley were admitted to the bar as attorneys Court appears to have met first in private houses, but at an early date a log structure was erected on the present Court House square, the lower story being used as a jail, and the upper for a Court Room. This served its purpose until 1809, when it was removed to make room for a brick structure, designed by John Ward, which was erected in 1809–10. This building, fully up to the times at that period, remained standing until 1870, when it was torn down to be replaced by the present magnificent structure.

"For a period the town progressed slowly, and as late as 1820 Washington street was nothing but a miry cow path, and it was many years before the great mineral wealth, the mainspring of Steubenville's present prosperity, was fully appreciated. The city was growing, however, slowly but surely, and as the surrounding country became settled, became an important commercial and manufacturing centre.

"The town became incorporated as a city March 5th, 1851. The population of the city in 1860 was 6,154. in 1870, 8,107, by the census. In 1871 considerable additional territory was taken into the corporation limits, making its territory to contain, according to that census. 10,000 people, and the population to-day is probably not less than 13,000 to 15,000."

The city at present supports seven newspapers, two dailies, four weeklies and one monthly. The first paper started was the Weekly Herald, which with a single exception, is the oldest newspaper in the State, and the largest four-page paper in the Union. It was established in 1806 by Messrs. Lowry & Miller, and it with the Daily Herald established by W. R. Allison in 1847, is now published by P. B. Conn. Both papers are Republican in politics.

The Weekly Gazette was started by Charles N. Allen in 1865, the same gentleman adding a daily in the fall of 1873. These

papers are now published by McFadden & Hunter, and are the leading Democratic journals of this section of country.

The Germania was started in 1876 by R. Schnorrenberg, and is printed in the German language. It is independent in politics, and is now published by Max Gescheider.

The Chronicle is a new Sunday paper published by Edgar A. Elliott, devoted to general news.

The Woolgrowers' Bulletin is the official journal of the Woolgrowers' Exchange, and as its name indicates, makes a specialty of that branch of industry. Its regular issue is once a month, but during the busy season, sometimes appears as often as once a week.

It will thus be seen that Steubenville has a local press of standing and influence, notwithstanding its nearness to several large cities enables the journals of those places to be brought hither within at most a few hours from time of publication.

Most of the ancient landmarks have disappeared, but the house where the late Hon. Edwin M. Stanton was born, and other objects of interest still remain. The old Market House, built in 1816, was among the last to go, and the space formerly occupied by it is now used as a public square.

# Former and Present Manufactures.

Steubenville at a very early date took front rank as a manufacturing town, which she has always retained, although the character of the leading manufactures has been changed since the discovery of shaft coal in this neighborhood.

The pioneer enterprise in the way of manufacturing was a grist and saw mill built in 1802 by Bezaleel Wells, on Wells's run then south of the city limits. A tannery was also in operation just north of the head of Market street at the same time.

A woolen mill was built at the head of Market street in 1814, which stood until 1867, when it was destroyed by fire, exactly 52 years from the day that its engine started.

The pioneer nail factory was built by Robert Thompson in 1811, making the nails by hand.

Two years later the Clinton paper mills were built, which, although being once entirely destroyed by fire were rebuilt with modern improvements, and are now in operation in charge of Mr. J. F. Dunbar, and employ 25 hands and turn out 5,000 pounds of paper per day, which supplies a number of daily journals in the large cities.

The first foundry was established by Arthur M. Phillips and Robert Carroll in 1816, and the same foundry enlarged and improved is in operation to-day under the ownership of James Means & Co., who have made extensive arrangements for the manufacture of steam engines and machinery generally, which they send all over the country.

Boatbuilding was a feature of the early days, a yard being run on the present site of C. Staples's sawmill as early as 1819. The "Bezaleel Wells," "Robert Thompson," "Steubenville" and "Aurora were among the steamers built here, and although the shops were destroyed by fire, a saw and planing mill were put up in their place, which in turn fell victims to the flames. But the mill was rebuilt, and in the last two years boat building has

been revived with results that give encouragement that large steamers may again be constructed here.

A leading establishment in 1813 was a large steam flouring mill built at the foot of Market street, but it was destroyed by fire in 1856. It was not rebuilt, but has been replaced by two other mills; the Ætna, belonging to Raney, Sheal & Co., at the corner of Sixth and North streets and the California at the corner of Washington and Seventh, with a capacity of 120 barrels of flour per day.

David Larimer built a cotton factory at the foot of Adams street in 1824–5, which was destroyed by fire in 1832. The Arkwright cotton mills were an important manufactory previous to the war, but the building is now used as the headquarters of the Ohio, Pennsylvania and West Virginia Wool Growers' Exchange, an inter State association, which selected Steubenville as its location on account of its superior shipping facilities and other advantages of this city, and the fact that it is the centre of probably the best wool growing region of the world.

The Ashland woolen mills were another important manufactory, but the fire fiend which in former years seems to have had a special spite against Steubenville's industries, swept them away on two different occasions. The woolen factory of James L. McDevitt, although it was once burned down was rebuilt and is still standing.

It is a fact not generally known that not only does Steubenville make more tumblers than any other city on the globe, but an amount equal to the combined product of all the balance of the country. The works were first constructed in 1846 by Joseph Beatty and Edward Stillman on South Third street. In 1852 they were taken charge of by A. J. Beatty, who increased the business so largely that in 1862 the old works were torn down and in place of them with their single stack, new ones with two stacks and four times the capacity of the old ones were erected. They are now managed by sons of the late proprietor, being still run under the firm name of A. J. Beatty & Sons, and notwithstanding the general depression in business have run with remarkable steadiness for years past, shipping their wares to all parts of the world, and competing with the English manufacturers in their own markets. The works employ about 160 hands and when in full operation turn out upwards of 36,000 tumblers per day.

The next establishment started after the Steubenville glass works was the Ohio Foundry in 1848. It is still in active operation under charge of W. L. Sharp & Son, who do a large business in the manufacture of stoves, fire fronts, mantels and iron work generally, which is a credit to any house.

The largest single manufacturing establishment of the city is the Jefferson Iron Works, which although it might be said to be a combination of manufactories under control of one corporation, yet has one single main object the making of nails. These works were originally constructed by Frazier, Kilgore & Co., in 1856, but came into the hands of the present owners in 1859, whose energy and experience in the business have made them a grand success, and besides greatly enlarging the capacity of the mill proper, have constructed two large blast furnaces, sunk a coal shaft for their own use, and made other marked improvements, so that to-day there is probably not a better or more complete works of the kind through the country. Notwithstanding the depression of the iron trade generally the last few years the fires in their furnaces have kept steadily up, save only when they closed down last summer to make extensive repairs and improvements which still should further reduce the cost of production. The excellence of their nails always gives them a ready market at the highest price. The works comprise two large blast furnaces, twenty-two boiling furnaces, three heating furnaces, and a set of eighty-four nail machines with a capacity of 3,500 kegs per week. The capacity of the furnaces is 24,000 tons of pig iron per year. The coal shaft and coke ovens attached to the works will be noticed elsewhere.

At the upper end of the city stand the works of the Steubenville Furnace & Iron Company, with a capacity of 14,000 tons per annum, and convenient coal shaft and coke ovens. Notwithstanding the glowing advertisements of some other regions, there is little doubt that iron can be produced here as cheaply as any other place in the Union. This furnace is now in operation, turning out a superior quality of iron which finds a ready market.

The Alikana works at the mouth of Wills Creek, about a mile above the corporation limits, were built in 1873. They are furnished with puddling furnaces and suitable machinery for making bar iron, and have a coal shaft 125 feet in depth, reaching a good vein of coal right at their doors.

The Acme Flint Glass Works belonging to Gill Bros. & Co., in the Fifth Ward, are devoted to the manufacture of lamp chimneys, and are one of the most extensive institutions of the kind in the country. In fact the enormous stack erected by them a short time since, is the largest one of the kind in the United States, and the works turn out no less than 275,000 lamp chimneys per week.

The Mingo Iron Works are located two miles below the city, and consist of two large blast furnaces, with improved shipping facilities both by river and rail, and have connected with them a series of coke and ovens and a shaft 260 feet deep.

Just adjoining here are the Anchor Oil Works which carry on the refining business, and are fitted up with superior machinery.

The Pan-Handle Chemical Works, owned by Messrs. McLaughlin and Long turn out a superior quality of ground bone dust, and have built up quite an extensive trade in this fertilizer.

Gas works were erected in 1852, and the city is now supplied by them. The regularly authorized price is $1.90 per thousand cubic feet.

The cupola furnace of Samuel Irwin in the Sixth Ward, and patent metal roof manufactory of Grafton & Hanvey are also worthy of mention.

In closing this hasty sketch of our manufactures we would not forget the P., C. & St. L. car shops, where the best of work in this line is turned out; the large Furniture Manufactory of Pearce & Sons, the planing mills of L. & W. C. Anderson and Robt. Hyde, the Fisher copperas works, the Winning keg factory, the Basler and Butte breweries, the Hineman and Grauten soap factories, the blank book manufactories of P. B. Conn and Sprague & Carnahan, and other minor works.

The one feature to which we desire to call special attention is the regularity with which as a whole our manufactories have run during the six years of commercial depression which, let us hope, are about closing. Steubenville felt the effects of the panic as did every other community, and many have been forced to practice economy, but the widespread distress if not actual starvation caused by the breakdown of old established firms has been unknown here. And it is a fact worth mentioning that during the prevalence of the extensive railroad strikes of 1877, the only

shops connected with the great trunk lines of the country which did not stop running, were those at Steubenville. Here the whistle blowed as regularly, and the work went on as smoothly as though the skies all around were tranquil and serene instead of blackened with clouds and filled with echoes of the raging tempest. Attempts to make trouble here were thwarted by the good sense of those to whom the appeal was made, and the reputation of the city as a law abiding community fully sustained. The intelligence and conservatism of the resident workingmen and mechanics of Steubenville have made themselves manifest on other occasions so as to be the subject of remark, and how far this is due to the climatic and natural advantages of the place ording steady employment at remunerative wages, is difficult to tell. Certain it is that manufacturers can nowhere find workmen possessing the elements of reliability and skill to a greater extent in any locality, and this, as every competent judge knows, is a very large item to be considered in the success of any enterprise.

# Coal and Mining.

For all classes of manufacturing an abundant and cheap supply of good fuel is the first requisite—without which no establishment or community can depend on permanent success, as the history of the past five years has too abundantly shown in many respects. This, however, is emphatically one of Steubenville's strong points. She has an inexhaustible supply of fuel, good and cheap. Near the tops of the hills are the seams of Pittsburgh coal worked from horizontal banks, which for many years were the city's sole supply, when the greater supplies of black diamonds further down in the bowels of the earth were unheard of and even unthought of. But in 1857 it was determined to reach these lower veins by shafts, and the pioneer effort was made in this direction at the head of Market streeet by Mr. James Wallace and others, forming the corporation known as the Steubenville Coal & Mining Company. The work, however, was new and the managers inexperienced, but coal was finally reached at a depth of 221 feet and 4 inches, and since 1865 the workings of the mine have been

most successful. A new shaft was sunk at Stony Hollow about a mile north of the old shaft in 1871, thus affording two outlets to the mine. Some 600 acres of coal lands embracing the 4½ foot seam now worked, with a 6 foot one further down, are now the property of the concern. When business is brisk over 7,000 bushels of coal per day are taken from the mines, and with 100 coke ovens capable of producing 3,500 bushels of coke per day, which is shipped to all points, a large trade is done in this direction.

Adjoining the coal field of the Steubenville Coal & Mining Company on the south is that of the Jefferson Iron Works, containing 800 acres. The average thickness of their working vein is about three feet nine inches, and from this in the busy season are raised 5,000 bushels of coal per day, which run their mill and supply the coke ovens turning out 2,500 bushels of coke each twenty-four hours. This shaft has been in operation since 1863, and is 175 feet in depth.

Just south of this is the shaft of the Ohio and Pennsylvania Coal Company, sunk in 1861–62, better known as the Averick shaft. It is 210 feet in depth and its annual capacity over 600,000 bushels of coal, a large proportion of which is shipped to Cleveland. They also have 28 coke ovens with all the modern improvements.

The last shaft in this series is that belonging to the Swift iron works of Newport, Ky., orginally known as the Boreland shaft. It has been open since 1862, and is 240 feet in depth. Its workable vein is 4 feet in thickness, and it can raise 800,000 bushels of coal yearly. The facilities for shipping by water are unusually good, and nearly all its product is disposed of in this way. All of the Steubenville pits are so located that they can arrange for loading coal into the barges without the expense of cartage. A number of coke ovens are attached to the Boreland shaft, but have not been in operation for some time, all the coal being shipped in its raw state.

The shaft of the Steubenville Furnace & Iron Company has already been referred to. It is 96 feet in depth, and brings up 2,000 bushels of coal per day, supplying a series of coke ovens for the furnace as well as the local market.

About half a mile above this is the shaft of the Jefferson Coal & Iron Company, 76 feet deep, with a number of coke ovens.

They sell a large proportion of their coal to the Cleveland & Pittsburgh railroad.

Above this are the Alikanna and Cable shafts, the first already referred to. A considerable quantity of coal is consumed yearly from the banks opened into the Pittsburgh vein previous to the opening of the shafts, and some of these banks do a good business. This latter coal partakes of the characteristics of the Pittsburgh vein, being remarkably free from impurities, burning away to a fine ash, and much desired for domestic purposes. But the main reliance for manufacturing is now of course on the shaft coal, because of its almost inexhaustible quantity as well as its heat making quality, and concerning it we will give the testimony of rigid analyses and disinterested witnesses.

The vein from which the main supply is drawn is No. 6 of the Ohio Geological survey, and of this vein the report says [Geology Vol. II, p. 146]:

"This is probably the most interesting and important of all our coal seams. It attains greater thickness, occupies a wider area, and in different outcrops and phases supplies a larger amount of fuel than any other. It also seems destined to make in the future still more important contributions to the wealth of the State. * * * At Steubenville it is about four feet in thickness, a partially open burning coal of great excellence. It has been considerably used in the raw state for the manufacture of iron, but it is now more generally coked."

So much as to the virtues of coal No. 6 in general, now as to its comparative value at Steubenville and other points. On page 149 of the volume referred to there are thirteen analyses of coals taken from this vein as it is mined in as many different parts of the State, the results of these analyses being as follows:

| | Specific Gravity. | Moisture. | Volatile Combustible. | Fixed Carbon. | Ash. | Sulphur. |
|---|---|---|---|---|---|---|
| New Lisbon, Col. Cy., | 1.260 | 3.45 | 35.56 | 56.36 | 4.63 | 2.50 |
| Camp Run, do | 1.270 | 1.525 | 38.425 | 57.925 | 2.125 | 1.22 |
| Salineville, do | 1.280 | 1.40 | 34.60 | 59.55 | 4.45 | 2.11 |
| Linton, | 1.276 | 2.60 | 35.17 | 55.80 | 6.43 | 2.63 |
| Carbon Hill, | 1.280 | 1.60 | 29.29 | 64.50 | 4.00 | 2.80 |
| Millersburg, | 1.369 | 5.10 | 39.00 | 51.70 | 4.20 | 2.26 |
| Uhrichsville, | 1.244 | 3.20 | 34.20 | 58.00 | 4.60 | 1.54 |
| Steubenville Shaft, | 1.305 | 1,40 | 30.90 | 65.90 | 1.80 | 0.98 |
| Waynesburg, | 1.273 | 3.30 | 33.30 | 60.00 | 3.40 | 0.66 |
| Keith's, Coshocton Cy., | 1.330 | 4.00 | 36.20 | 54.70 | 5.10 | 2.69 |
| Rock Run, Musk. Cy., | 1.293 | 3.47 | 37.88 | 53.30 | 5.35 | 2.235 |
| N. Straitsville, | 1.269 | 6.90 | 30.25 | 58.19 | 4.66 | 0.79 |
| Nelsonville, | 1.280 | 5.95 | 32.38 | 57.12 | 4.55 | 0.77 |

The most valuable element in coal for manufacturing purposes is its fixed carbon, and by the above table it will be seen that the

Steubenville shaft coal contains a greater percentage of this essential element than any other in the list. But had we space to publish all the analyses given of the coal from the other veins, published in this same volume, the strong fact would be brought out that our coals contain more fixed carbon *than any other in the State*. Consequently we are warranted in saying that a po nd of Steubenville coal will do more work than a pound selected from any other locality of our great commonwealth. With regard to ash and sulphur, those nuisances in the coal veins, the showing is equally favorable. As to ash Steubenville stands decidedly lower than any of the other points, and nearly at the bottom on sulphur. The latter shows less than one per cent., and while the difference between Steubenville and the lowest on the list is so small as to be of no practical consequence the difference between it and the highest is very marked. Ash and sulphur combined make a smaller percentage than any of the other examples.

Volume III. of the same series says further of this vein: "Coal No. 6—the 'big vein' of the northern part of Jefferson, county, the 'shaft coal' of Steubenville and Rush Run, is the thickest and most valuable coal found in this region. * * * At Steubenville it is a very pure, partially open burning coal, largely used, when coked, for the manufacture of iron."

Further on the same report says:

"At Steubenville numerous shafts have been sunk to Coal No. 6, and it is extensively worked, both for home consumption and for exportation. Several furnaces and rolling mills have been located here, and these with the other manufactories, attracted by the abundance and excellence of the coal have made Steubenville the industrial centre of the county, as well as the centre of population."

"The shaft of the Steubenville Furnace & Iron Company, known as the Gravel Shaft, is 92 feet deep, the coal is 3 feet 10 inches thick, and of superior quality. It is coked for use in the new furnace of the company, and an analysis of the coke, made by Otto Wirth, of Pittsburgh, gave the following for its composition:

| | |
|---|---|
| Water and hydrogen, | 0.72 |
| Fixed carbon, | 90.63 |
| Sulphur, | .27 |
| Ash, | 8.38 |
| Total, | 100.00 |

"This indicates a quality superior to that of the Connellsville coke, in which there is usually 1 per cent. of sulphur, and 10 to 14 per cent. of ash."

It will be noticed that Steubenville raw coal contains less per cent. of sulphur than the most celebrated coke of the West.

The above is the testimony of one set of State officials as to the value of Steubenville coal. Equally valuable testimony is afforded by the late Mine Inspector Roy, who on pages 46 and 47 of his annual report for 1874 says:

"The two mines of the Steubenville Coal & Mining Company, at Steubenville, are worked through on each other. The workings of the old mine, the Market Street shaft, are very extensive, and are carred forward on the same system as that prevalent in the county of Durham, in England, the other mines of the district being also worked on the same plan, all the mine superintendents around Steubenville being originally, miners from that coal district of England. The Market Street shaft and the Stony Hollow shaft are about a mile apart, the former being the downcast and the latter upcast. Both mines are under a thorough and perfect system of ventilation. There are no complaints of bad air from these mines. The amount of current discharging itself at the furnace was measured and summed up thirty-nine thousand cubic feet per minute. The air-ways are all large and admit of the easy flow of air.

"There are nine shaft mines in this district, all well ventilated and superintended. The coal lies very flat in the ground, admitting of square and tasteful work."

On page 8 of the report of 1875 speaking of the Steubenville shafts the same officer says:

"They range from 180 to 261 feet of perpendicular depth, and are the deepest coal mines in the State. A single visit to this district is sufficient to know that they are well and skillfully managed. The under ground workings are modeled after those of the Newcastle district of England—a coal-field in which the art and science of coal mining is better understood than in any other coal region of the globe.

"The mines of Steubenville make fire-damp, but so perfect are the ventilating arrangements that the gas is diffused through the atmospheric air and swept away as rapidly as it is evolved from the coal strata, and its presence is seldom seen in any of

the working places of the miners. The mines are, however, examined every morning by a corps of experienced fire-viewers before any of the miners are allowed to descend, and nothing is left to miscalculation or to accident. Timely and elaborate arrangements are made for the creation and maintenance of an abundant supply of air to all the ramifications of the mines. The furnaces, air passages, upcast and downcast arrangements, all are roomy, and bear proper proportion to each other, so that the best results are attained. The miners never complain of bad air in this district. The underground manager of the Boreland shaft reported 46,000 cubic feet of air per minute as circulating through the mine, the underground force being less than 100, making a column of air of 250 cubic feet per man per minute.

"The Rolling Mill shaft and the shaft of the O. and P. Coal Company have also strong currents of air moving through the mine. They were not measured, and so the amount can not be given, but it was all-sufficient. The Rolling Mill shaft has a furnace and the exhaust steam from a No. 6 steam Cameron pump to produce rarefaction; the Furnace Company's shaft exhaust steam alone—too weak a power for a large mine—(this was a new opening, however, and the force of men was small at date of visit); the Mining and coal Company a furnace; the Boreland shaft a furnace; the Bustard shaft a furnace; the Mingo shaft a furnace; La Grange exhaust steam (a new mine); and Rush Run a double furnace. All these furnaces were unusually well constructed, and the fire constantly maintained.

"The manager of the Stony Hollow shaft and the Market Street shaft has sent me a monthly report of the amount of air in circulation. These two mines, belonging to one firm and managed by one engineer, are three-fourths of a mile apart, and are holed through on each other, one serving as a downcast and the other as an upcast shaft.

"The following is the monthly statement, being equal to 500 cubic feet per minute per person employed:

| | | | | |
|---|---|---|---|---|
| January | 65,000 | cubic | feet | per minute. |
| February | 62,824 | " | " | " |
| March | 55,940 | " | " | " |
| April | 50,070 | " | " | " |
| May | 50,060 | " | " | " |
| June | 48,640 | " | " | " |
| July | 50,456 | " | " | " |
| August | 56,570 | " | " | " |
| September | 62,000 | " | " | " |
| October | 67,212 | " | " | " |
| November | 68,925 | " | " | " |
| December | 53,250 | " | " | " |

At page 5 of the report of 1876 we find the following :

"I have in former reports alluded to the superior ventilation prevailing in this region, surpassing any other district in the State. I have never received a single complaint of bad air, but all the miners have united in bearing willing testimony to the salubrious condition of the mines. Entries and rooms alike are well and thoroughly aired, and the moving columns of wind are strong and vigorous. There are no strikes in this region ; there is no fault finding with the bosses. Many mine owners and bosses in other regions curse and traduce their miners for their chronic spirit of grumbling and complaining ; but when the interiors of their mines are examined it is no wonder miners grumble and complain. In many of the working places a light will scarcely burn, and the miners are enveloped in thick and suffocating clouds of smoke. Such mine owners and their bosses, to a man, can see no necessity for for a mining law, and regard it as an unwarranted interference with their business.

"The Market Street Mine, one of the oldest of the series of shaft openings, has been worked continuously since the pit was sunk. The Stony Hollow pit is sunk at the advance workings on the north side of the old pit, and the two shafts form one colliery, the entries being ten feet wide, the rooms eighteen feet wide, the pillars twenty-four feet thick by seventy-five feet long. If gas appears in the heads of the rooms before the seventy-five-foot pillar is won, an air-crossing is cut, so that there is not always regularity as to the length of the pillars.

"There are five stations in the mine, three on the north side, and two on the south side. In these stations, owing to the thinness of the seam, the hauling mules can not enter the rooms, and the cars, which hold twelve bushels each, are pushed out to the hauling roads by "putters," three putters being usually employed in a station of fourteen or fifteen rooms. The stations where the mules haul are located as near the center room as practicable, being generally from three to four pillars behind the working faces. These centres are moved forward as the workings advance. By this arrangement the putting roads are made shorter, and have equal men on each side of the mule road.

"Some years ago a panel or square of work was laid on the long-wall system, all the coal being cut away as the workings advanced forward, after the usual practice in long-wall mining,

but the result was deemed unsatisfactory, and the practice was abandoned.

"There is an abundant ventilation prevailing in every division of the mine, the amount of air in circulation reaching 50 000 cubic feet per minute. The air is split at the bottom of the shaft into two nearly equal parts, one split going north and the other south. The south split is again split into two parts a short distance from the bottom of the shaft, one-half going east. Six hundred feet ahead the eastern split is again divided, the northern division ventilating the 'east arm' on the north side of the pit; thence it passes to the Stony Hollow pit, traversing a series of rooms there, and returns to the upcast The south part of the east split travels south, ventilating a series of rooms, then uniting with the part it split from, airs the workings on the southwest, then moves north to the pillar workings, passing which it returns to the upcast at the old pit furnace."

On page 14 of the report for 1877 this testimony is added:

The plan of laying out the workings, which prevails at all the Steubenville mines, is modeled after the practice followed in the collieries in the north of England. The pillars left in the English mines are larger and stronger than those in Steubenville, because the pits are so much deeper in the Old Country, some of them reaching one thousand eight hundred to two thousand five hundred feet of perpendicular depth In Steubenville the rooms are eighteen feet wide, the walls and cross-cuts twelve feet wide, the pillars twenty-four feet in thickness and seventy-two feet in length. The walls and rooms cross each other like latitude and longitude lines, the walls being driven on the butts, and the rooms on the face of the coal. The main entries are ten feet wide. The miners get seventy-five cents per yard, besides the tonnage price for driving entry, but nothing is allowed for wall driving.

"The mine cars hold twelve and one-half to fifteen bushels, and are pushed out from the room faces to the stations on the hauling roads by putters or pushers. In Boreland's Shaft, Shetland ponies are used instead of putters. These ponies are only three feet two inches to three feet six inches high. This mine has seven of these hardy and useful animals under ground. In the galleries and hauling roads a foot or more of the fire-clay floor is taken up to make height for the hauling mules. These roads are made five feet two inches high above the rail, and the

track is laid with 'T' iron. The coal hewers dig and load the coal, the deputies laying track and setting props in the rooms. Every digger works by candle light, instead of the ordinary miner's lamp. The candles are made very small, there being twenty to the pound; they are fastened to the pillar side with a piece of soft clay. Three to three and a half of these candles are consumed per day by each miner. The candles give less light than the miner's lamp, but they make no smoke, and miners who are in the habit of using them prefer them to the lamp. The deputies and drivers use lamps.

"In mining the coal, powder is used to knock it down, each digger firing three shots per day on an average, two in the top and one in the bottom coal. The workmen fire at all hours of the day; but a few inches of powder suffices for a 'shot,' and not more than three pounds of powder per man per week is needed for blasting purposes. No blasting is done in the solid coal; a shot is undercut to the depth of four feet, if the miner is a skillful workman.

"The mine mules are kept day and night under ground; the stables are hewn out of the solid coal pillars at the bottom of the pit, and are dry, well aired, and comfortable. The mules are fed at four o'clock in the morning by the fire-viewers. Work commencing at six o'clock, an hour is allowed at noon for dinner, and work ceases at five in the evening.

"The miners are paid every two weeks in cash, and there are no store orders forced upon them, as is done in many other districts of the State. As the Bustard, the Gravel, the Stony Hollow, the Market Street, the Rolling Mill, the Averick, and Boreland Shafts are all situated in Steubenville or its immediate vicinity, the miners live in town, and a large number of them own the houses and lots in which they live, and have, in many cases, other property. Fully one-half of them take daily newspapers, though it must be confessed that here, as well as everywhere else in the Union, not a few spend much of their hard earnings in the saloons in soul debasing pleasures."

More might be added, but it would be superfluous.

While the coal and iron industries have perhaps felt the effects of the panic more than any other yet they do and will remain leading factors in the prosperity of the whole country, and as they revive and prosper other interests will follow. But the

time has gone by, if not forever at least for many years when iron works can flourish everywhere. All now concede that their location should be at the mouth of the coal pit, avoiding the heavy expense for freightage which is now in many cases equal to the entire margin of profit. Where there is no freightage for fuel is where the iron works of the future are to be. And the same is true to a greater or less extent of other manufactures. Steubenville is so situated as to place her manufactories at the mouth of the pit, and that tells the whole story in a nutshell.

## Other Minerals.

Although coal is of course the the leading mineral of this locality, it is by no means the only one which abounds in paying quantities. The supply of building stone is inexhaustible, while limestone, fire clay, iron ore, brick clay and chemical matters all abound.

The first mentioned is the most important and consists mostly of a light colored sandstone which becomes somewhat darker by exposure to the air, and which is as durable as the hills themselves. There are four leading sandstone quarries opened in our vicinity, known as Speaker's, Bustard's, Schwartz's and Spencer's, of good quality susceptible of ruled cranelled, drafted, pinked or pitched ashler. Other quarries are found on both sides of the river. Samples can be be seen in the City Engineer's Office or in the partial construction of the county buildings, new St. Paul's Church, Pan-Handle Railroad bridge, Post Office, Dougherty block, Sherrard & Mooney's bank, Jefferson Insurance, and many other of our most valuable buildings. In many cases where it has been exposed to the weather for years, the marks of the cutter's tools are as sharp as when first made. The quarries named are on the Ohio side of the river and within or just outside the city limits, and on the opposite side of the river there are supplies rivaling these, which can be floated over at comparatively trifling expense. A brown sandstone is also found in the neighborhood, although it is not so plentiful as the other.

Limestone also plentifully abounds, and although little of it is suitable for building purposes, yet it is largely used in the manu-

facture of lime, and as flux in blast furnaces. Steubenville lime presents a remarkable freedom from magnesia, and on this account is superior for cementing purposes, especially in locations exposed to the weather.

As to fire clay it is beneath and all around us, overlying and underlying the coal seams. The supply in the shafts is inexhaustible, but as yet it has been but little worked on account of the cheaper method of running banks into the sides of the hills, by which means a few miles north of town, an enormous trade has been built up in the line of terra cotta, fire brick, tiling, sewer pipe, etc., both sides of the river being lined for a long distance with the extensive manufactories devoted to this purpose.

Within six and eight miles of the city have been found excellent beds of iron ore, which have been tested by analysis and actual use and found to be of sufficient purity for commercial purposes. Pockets of hematite yield 50 to 60 per cent. of iron, and a two-foot vein of grey ore is also found. When the Island Creek narrow gauge, more fully referred to elsewhere, is completed, these ores can be put down in the city at a trifling cost, and even if they do not come into profitable use at once are a sure guarantee of protection against a material advance in Missouri or Lake Superior ores, whether that advance result from increased cost of transportation or stronger demand at the mines. As intimated, this ore has been tested in one of the furnaces here with good results.

The common brick clay burns readily into a good common red brick, strong and durable, and from it pressed bricks are also made, of excellent color and finish.

Mineral springs abound convenient to the city, containing solutions of alum, iron and other substances, and it is not impossible that a closer examination of their qualities might result in proving them of economic value.

Clean, sharp sand, suitable for building is found in abundance within the city limits, and also along the river, where it is easily gathered up and boated to town.

Although natural gas cannot be classed as a "mineral" yet as it is a product manufactured by Nature in the bowels of the earth, a reference to it here will not be out of place. It is found in our coal mines as already intimated, and has in some cases been conducted through pipes to the upper air, where it burns freely. No

attempt has been made in the city to convert it to any practical use except giving light at night, but twelve miles above town large manufactories of fire brick and tiling are run by this agency.

Petroleum has been found within twenty-eight miles of the city on the north, and also east and west, but none has yet been found near town.

Salt wells have been operated in the neighborhood in the early years, and this may again become a live industry at a future day.

## Commercial Facilities.

Steubenville's commercial facilities, both by water and rail, are excelled by few interior cities. First and foremost the Ohio river washes its entire front, navigable from this point southwardly, the direction in which we seek our markets and from which much of our raw material comes, the greater part of the year. As this article is being written the river is at what is considered the low stage, and Pittsburgh and the towns above are completely isolated so far as water navigation is concerned. Yet a light draught packet leaves here every morning for below, making through water connections with all points in the South and West, thus for all practical purposes constituting Steubenville for the time being the head of navigation. The advantages to our manufacturers of being able to use this great natural highway after it has been closed above are apparent. The peculiar benefits arising from Steubenville's particular location in regard to river and rail have already attracted the attention of capitalists, and a large water frontage has been purchased opposite the city with the expectation of building at an early day, extensive coal chutes and transporting coal from points even adjacent to Pittsburgh thither via the Pan-Handle railroad and here loading it into barges. A very large proportion of all the coal lost in transportation down the Ohio is lost between here and Pittsburgh, and by having the chutes and bringing the coal down in the manner referred to above, not only is twenty-four hours time saved on every rise, a very important item, but the dangers arising from the bars, bridges and other obstructions between here and Pitts-

burgh, upon which so many barges have been grounded or wrecked, are avoided. The erection of these chutes is only a question of time, and it will at once make this city the great head of coal navigation the year round. The harbor here is broad and deep, and able to accommodate a large fleet of boats at all stages of water. On the Ohio side of the river is an admirable ice harbor, formed by the protecting piers of the Pan-Handle railroad bridge, which break up the large cakes of ice into fragments as they come down, and the current throws their weight largely to the opposite side of the river. It is estimated that the cost of shipping coal from Pittsburgh to Louisville is one and three-fourth cents per bushel, and for reasons previously referred to it is safe to say that at least the fractional three-fourths is expended before the barges reach Steubenville, and hence the advantage in shipping from here to lower ports is obvious.

Outside of coal the advantages of the river as a means of transportation have not been neglected. During the regular boating season in addition to the daily morning packet to Wheeling making through connections, there is an additional boat for the latter point and below on Monday, Wednesday and Friday evenings, a through packet for Cincinnati the same evenings and also on Sunday. There is a regular Sunday boat for Pittsburgh and two boats on Tuesdays, Thursdays and Saturdays. In addition to the above there are weekly packets each way to and from St. Louis, and numerous transient steamers for points on the upper and lower Mississippi, the Yellowstone and the Far West. With such competition river freights are necessarily low, and shippers have the opportunity of making most favorable terms.

As to railroads the city is also well located, and the traveler can leave town in five different directions by rail, with the prospect in the near future of a sixth.

The Pittsburgh, Cincinnati & St. Louis Railway, or the great Pan-Handle route, is of course the leading outlet, and the first estabment of this road which reaches out to and connects with lines extending across the continent, is due to Steubenville money, energy and enterprise. Its original nucleos, the Steubenville & Indiana railroad was incorporated February 24th, 1848, by James Wilson, James Means, Nathaniel Dike, William McDonald, Daniel A. Collier, John Orr, John Andrews, David McGowan, James Gallagher, James McKinney, Roswell Marsh, James Turn-

bull and Alexander Doyle. It was opened in 1853 after severe financial struggles and an expenditure of no less than $300,000 on the part of this township and city through its public officials and private citizens, for which, except in the way of general advantages to the community not a dollar was ever realized to the original subscribers. A few years after the opening of this road, work on the Steubenville & Pittsburgh road was begun, which ended in the completion here of the first railroad bridge over the Ohio in 1865. Shortly after that the two roads were consolidated under the name of the Pittsburgh Cincinnati & St. Louis Railway, which as stated above, is one of the great trunk lines of the country, and by its connections all points east and west can be reached. To merely recite a list of its connecting lines would take up more space than we have at command

The extension of the Cleveland & Pittsburgh railroad to this city was made in the fall of 1856, which on the south connects with the Baltimore & Ohio railroad for the East, and the Central Ohio for the West. It also connects with the Pittsburgh, Ft. Wayne & Chicago, Atlantic & Great Western and other roads, and is as nearly an air line to the lakes as can be made.

The Pittsburgh, Wheeling & Kentucky road connecting this city with Wheeling, was completed two years ago, and does a profitable business. It has direct connection at its southern terminus with the B. & O. road, and being under the management of P., C. & St. L. company its trains cross on their bridge, and arrive and depart from the Pan-Handle depot near the centre of the city.

A third railroad enterprise is now under way and is being pushed vigorously towards completion, being a narrow gauge road from Richmond in this county to the city, with the ultimate idea of extending it from Richmond to Youngstown and connecting with the narrow gauge system which is destined at no distant day to extend across the country from east to west. The grading is now about completed from Richmond to where the road strikes the river six miles above Steubenville, and before a great while this much is expected to be in operation. The hills along the route are filled with valuable minerals and abound in growing timber, and the agricultural wealth along the line gives promise of a paying business from the start.

An illustration of our railroad facilities is afforded by the cir-

cumstance that a traveler for Pittsburgh and the East has no less than seven passenger trains daily from which to choose the one which best suits his time and convenience. During the late railroad war freight was shipped to Cleveland at the rate of two cents per hundred pounds, and to Chicago for six cents, while manufacturers up the river on a certain occasion have offered in consequence of only having a few miles of transportation, to deliver fire brick, fire clay, stoneware, sewer or water pipe, flue linings, paving tile and roofing tile in the city at from 15 to 20 per cent. lower than any other inland city in the State of Ohio. The Pan-Handle railroad this summer has had thousands of ties cut in the mountains of West Virginia delivered at the wharf in this city as the most convenient and eligible place, and from which they could be taken to their ultimate destination most economically, while with each spring freshet rafts containing thousands of feet of lumber and sawlogs without end are floated to our wharves from the Allegheny mountains at merely nominal cost, thus giving our builders the advantages of competition, and choice between that and lumber brought by lake and rail from the Northwest.

These are a few of the advantages Steubenville enjoys in a commercial point of view, and they are such as to commend themselves to the attention of every careful business man.

## Schools and Education.

Not of less importance to a man of family than the providing of his offspring with the material comforts of life is the opportunity afforded to educate his children. In this age of the world a young man or girl without an education must always remain near the bottom of the ladder, even though their qualities may be of the highest order in many respects. Education then is a matter of primal importance, and so the pioneers of our State and city evidently thought, for they early laid the foundations on which to build the superstructure of our common schools and higher institutions, and for over half a century has their work stood the test.

The oldest educational institution in the city and one of the oldest in the West, is the Steubenville Female Seminary, opened by Rev. Dr. C. C. Beatty, on April 13th, 1829, more than fifty

years ago. For awhile the school was held in Dr. Beatty's own residence on the west side of High street between Market and Adams. It soon outgrew these limited accommodations, and a site occupying an entire block bounded by High, Water, Adams and South streets having been selected a suitable building was constructed thereon the same year. The buildings were in time increased to such an extent that they now fill almost the entire west boundary of the Seminary grounds. In 1833 the first graduates received their diplomas, the advance guard of an army of over 4,500 who have gone forth from these venerable halls, and have scattered themselves around the whole circle of the earth, many of them rising to positions of influence, some of them as missionaries, and others acting an important part in the world's great drama. Rev. A. M. Reid, the present Principal and Proprietor of the school has been with it for nearly a quarter of a century, and for many years he and his wife have had entire charge of the same, the advancing years and feeble health of its venerable founder having long withdrawn him from any but a nominal connection with the institution. The Seminary is conducted under the auspices of the Presbyterian Church, but children of all denominations find a home within its hospitable walls. The grounds are laid off in tasteful style, and leafy trees and falling waters of the fountain make the place one of cooling delight, especially, on a warm summer's afternoon. The buildings themselves are roomy and comfortable, and the school room is airy, light and pleasant. A large library, complete and excellent chemical and philosophical apparatus, and collections of specimens in the line of geology, ethnology and natural history, furnish ample materials for interesting object lessons, and the varied and beautiful articles gathered up in different trips to the old world, and which may be found in every part of the building, make it a place of rare attractions. A well fitted up gymnasium is at hand to aid in healthy bodily development. One of the late additions to the institution is a preparatory school, with features of the Kindergarten system, for the little ones, which has met with marked success. At the close of the last term 139 scholars were enrolled, from all parts of the country, under a corps of officers and instructors numbering fifteen, teaching all the branches to be found in a first-class educational institution for young ladies. The course of study is divided into four years,

Primary, Middle, Junior and Senior, and under its present management the school gives promise of a lengthy career of increased usefullness and honor.

But it is not especially in private institutions, however popular or efficient, that our municipality prides itself. It is in the people's schools, where the children of the State are educated without money and without price. For over forty years they have been in operation, moulding the intellects of at least two generations. The first Board of Education, consisting of three persons, Dr. C. C. Beatty, Dr. John Andrews and James Means, was organized in 1838, making the beginning of the public school system in this city. In 1839 two buildings, then deemed commodious, were erected for school purposes, one on upper Fourth street, and the other on lower Fourth, at a cost of $4,000, and were occupied in November of that year. These with rented rooms accommodated the city youth until 1858, when a material addition was made to school facilities by the purchase of "Grove Academy," a spacious building which had been previously occupied as a school for young men, by Rev. Dr. John Scott, at a cost of $5,000. Within ten years the growth of the city compelled the further enlargement of accommodations, the end of which was the erection of a large new building on the corner of Fourth and South streets, which was completed on April 1st, 1870, at a cost, including furniture, of $60,000. The building is four stories in height besides the attic, and is a massive structure containing twelve school rooms with accommodations for 800 pupils, and is provided with a large number of class rooms. It is heated throughout with steam, and lighted by gas, and contains all the modern improvements. The High School is located in this building and has a complete chemical and philosophical apparatus, with a library of reference. The demand for room still increasing, by a vote of the people a new and more commodious building was ordered on the corner of Fourth and Dock streets. This was completed in 1873, and is a fine structure of pressed brick, constructed in a pleasing style of architecture, and surrounded by tasteful and well kept grounds. It is three stories in height including the basement, and contains twelve school rooms with accommodations for 700 pupils. The colored school on North Third street is a neat two-story brick building capable of accommodating 160 pupils. In the Sixth Ward are two good

buildings, a frame of three rooms in what is known as the rolling mill district, with accommodations for 160 scholars, and a two-story brick in the Fisher district with room for 120 scholars. In the western part of the Third Ward, or "Jacksonville," is a frame schoolhouse holding 60 pupils, for the accommodation of the people of that section. The appearance of our schoolhouses has attracted the attention of strangers, and no care is avoided to make the instruction given correspond to the outside impression. The course of study in the primary and intermediate departments is of the most approved kind, and the highest educational skill is utilized to bring out every dormant faculty of the pupil. To give a full list of the studies pursued would occupy too much space, but a glance at the High School curriculum will give an idea of the standard which prevails in that department.

At the beginning of the school year each pupil is expected to select one of three courses of study, the English, and German, or the Classical, and to adhere to it throughout the year. Greek is optional; a class will be formed, if it is desired, at the beginning of the school year.

## C CLASS.

| ENGLISH COURSE. | CLASSICAL COURSE. |
|---|---|
| English Grammar. | Higher Algebra. |
| Higher Algebra. | Higher Arithmetic. |
| Higher Arithmetic. | Physiology. |
| Physiology. | Physical Geography, or |
| Physical Geography, or | *Book Keeping.* |
| *Book Keeping.* | Latin Grammar. |
| Botany. | Latin Reader. |

## B CLASS.

| | |
|---|---|
| Higher Algebra. | Higher Algebra. |
| Geometry. | Geometry. |
| General History. | Cæsar. |
| Rhetoric, and | Rhetoric, and |
| American Literature. | American Literature. |
| Natural Philosophy. | Natural Philosophy, or |
| | Greek Grammar. |

## A CLASS.

| ENGLISH COURSE. | CLASSICAL COURSE. |
|---|---|
| Trigonometry. | Trigonometry. |
| Astronomy. | Astronomy. |
| Chemistry. | Chemistry, or |
| English Literature. | Greek Reader. |
| U. S. Constitution. | U. S. Constitution. |
| Moral Philosophy. | Cicero. |
| Review of Arithmetic, | Virgil. |
| Geography and Grammar. | Latin Composition. |

German is also one of the optional studies not only in the High but in the Grammar schools, and during the last term this department embraced 159 pupils, under charge of Mr. Otto Fuchs. Music is also taught during a portion of the time, with the usual literary exercises. The High School was opened in 1855, and the first pupil graduated in 1860, and from the ever widening stream which since then has poured forth in uninterrupted flow, has been supplied first class educational talent not only for the Steubenville schools, but elsewhere. Such has been the reputation of the schools that there has always been a larger or smaller number attending from abroad, the tuition fees for non-resident pupils being as follows :

| | |
|---|---|
| Primary School, per month, - - | $1.00 |
| Grammar " " " - - | 2 00 |
| High " " " - - | 3.50 |

The Superintendent for the past nine years has been Prof. M. R. Andrews, under whose management they were brought to the highest state of efficiency possible, but he accepting a position in one of our Ohio colleges, Prof. Mertz, of Wheeling, succeeds, who comes with the highest recommendations, and under whose charge there is every reason to suppose that the previous reputation of the schools will be fully sustained. He takes charge at the opening of the next term. Following is a list of the different schools in the city now in operation with the teachers for the coming term, and the number of pupils in each for the term just closed :

## SOUTH SCHOOL.

| ROOM. | TEACHER. | NO. PUPILS. |
|---|---|---|
| High School, | A. M. Rowe, | 116 |
| " " | M. W. Sutherland, 1st Asst. | |
| " " | Annie E. Gilmore, 2d Asst. | |
| Grammar, A & B, | Elvira O'Neale, | 67 |
| " " | Lizzie Neill, Asst. | |
| " C, | Rebecca Hull, | 45 |
| " D, | Mallie Clemens, | 71 |
| " D, | Mollie McCauslen, Asst. | |
| No. 7, | Dora Cochran, | 52 |
| No. 6, | Rachel McCarel, | 58 |
| No. 5, | Lizzie M. Neill, | 47 |
| No. 4, | V. F. Saunders, | 59 |
| Nos. 1, 2 and 3, | Mrs. Anna H. DeVoir. | |
| No. 3, | Louisa Draper, Asst., | 48 |
| No. 2, | Nettie Kendall, Asst., | 49 |
| No. 1, 1st Div., | Jennie Crewson, Asst., | 60 |
| No. 1, 2d " | Martha Sutherland, Asst., | 86 |

## NORTH SCHOOL.

| | | |
|---|---|---|
| Grammar, | D. W. Matlack. | |
| " A & B, | Sallie P. Kells, Asst., | 98 |
| " C, | Anna Moncrief, 1st Asst., | 47 |
| " C, | Nannie Hays, 2d Asst., | 52 |
| " D, | Dessa Moreland, | 54 |
| No. 6, | Anna Cox, | 58 |
| No. 6, | Anna Moore, | 55 |
| No. 5, | Anna D. Dohrman, | 63 |
| No. 4, | Julia C. Linn, | 64 |
| No. 3, | Angie S. Hall, | 61 |
| No. 2, | Dora J. Evans, | 51 |
| No. 1, 1st Div., | Nellie McCauslen, | 73 |
| No. 1, 2d " | Sarah F. Brown, | 71 |

## COLORED.

| | | |
|---|---|---|
| Grammar, | Mary Hill, | 81 |
| Primary, | David S. Bruce, | |

## ROLLING MILL.

| | | |
|---|---|---|
| Principal, | Martha J. Leslie, | 156 |
| 1st Primary, | Lizzie Parrish, | |
| 2d " | Libbie Dungan, | |

FISHER'S.

| | | |
|---|---|---|
| Principal, Primary, | W. H. Garrett, Mrs. Garrett, | 130 |

JACKSONVILLE.

| | | |
|---|---|---|
| Primary & Inter., | A. F. Matlack, | 35 |
| Total enrolled, | | 1,917 |

The first school superintendent was Thomas F. McGrew who was followed by W. J. Sage, J. N. Dessellem, Eli T. Tappan, Joseph Buchanan, M. R. Andrews and H. N. Mertz. The corps of teachers including the Superintendent now numbers forty.

Our school houses are all paid for, and notwithstanding the liberal expenditures for school purposes, taxes as will be seen further on, are light. The city paid in teachers' salaries last year the sum of $20,235.11.

In addition to the schools already enumerated, in 1868 Rev. W. T. Bigelow, pastor of St. Peter's Roman Catholic Church, founded the schools connected with that parish. These schools, which occupy five rooms in the basement of the church, lately closed their term with an enrollment of over 300 scholars. They are conducted by Sisters of Charity under the supervision of the pastor of the congregation, and have attained a deserved reputation for efficiency and scholarship.

The last school census taken in September, 1878, gave the following as the number of persons in the city between the age of 6 and 21:

| | MALE. | FEMALE. | TOTAL. |
|---|---|---|---|
| First Ward, | 388 | 382 | 770 |
| Second " | 465 | 535 | 1,000 |
| Third " | 400 | 448 | 848 |
| Fourth " | 362 | 347 | 709 |
| Fifth " | 322 | 306 | 626 |
| Sixth " | 324 | 321 | 645 |
| Total, | 2,261 | 2,337 | 4,598 |

Of these about 2,400 are enrolled in the different schools, and as even those who pass through the High School course graduate a considerable length of time before reaching twenty-one, while many stop with the first year of the course or even at the end of

the Grammar school it will be seen that taking out invalids, those at school elsewhere, at work and left off the enrollment for good and sufficient causes, the proportion left in idleness is perhaps as small as any other place where compulsory education does not exist.

In times past good private schoools have flourished in the city, but the excellence of our public schools has drawn so largely on them the last few years, that with the exceptions above enumerated they have mostly passed out of existence. All classes attend our public schools, and children there are thrown in the best society.

## Churches and Religion.

The spiritual needs of the city are at present fully supplied ; it having no less than 20 churches and chapels which is an average of one for about each 700 people. Nearly all the different congregations have substantial and handsome places of worship erected and paid for, and their financial as well as their spiritual condition is probably as good as any similar collection of religious societies elsewhere. A short sketch of each is all that we have room for.

The oldest organized religious society in Steubenville is the First Presbyterian Church which dates its autonomy back to the year 1801, preaching, previous to that time, having been had by such traveling divines as happened to be in the vicinity. Their first place of edifice was erected in 1803–4, a small brick building, located on what is now the site of the Old Presbyterian Church on South Fourth street near Adams. This served its purpose until 1817 when a much larger structure, two stories in height and having galleries running around the interior, took its place, and was used by the congregation until 1872. Previous to that date the congregation had felt the need of a larger and better building, and as a result there was completed in August of that year the large and commodious structure on North Fourth street, at a cost, with the ground of about $73,000. This building is of brick, with stone front, 160 feet in length by 47 feet 10 inches wide at the front and 80 feet at the rear. The south tower is 158

feet high, and the church has sittings for 1,100 people. It is of the Elizabethan style of architecture with the peak of the roof running up to a height of 81 feet from the ground, and handsomely fitted up with stained glass windows, etc. Five of the windows are memorials to Rev. Drs. Snodgrass, Jennings, Beatty, Comingo and Woods. At the rear of the church is the chapel of two stories, containing Sunday School room of 58x38 feet, pastor's study, etc. Rev. Obadiah Jennings was the first pastor retained exclusively by the congregation, who ministered until 1823, when he was succeeded by Rev. Dr. C. C. Beatty, the latter being relieved at his own request in 1835, and succeeded by Rev. Henry C. Comingo in 1837, who died during his pastorate. Rev. Henry Woods took charge in 1861, and Rev. T. A. McCurdy in 1868. The latter resigned in 1875 to accept a call to Wooster, Ohio, and was succeeded by Rev. Dr. Wm. Grimes, the sixth pastor and present incumbent, under whose administration the congregation is in a flourishing condition.

The Second Presbyterian Church became a separate organization on January 1st, 1838, with Rev. Joseph Chambers as the first pastor. Their first house of worship was the building used by the Christian congregation on North Fourth street, which they occupied until June, 1871, when they removed to their new building then completed on the corner of Fourth and Washington streets. It is a handsome structure of pressed brick with stone trimmings, costing over $43,000 and with a spire 160 feet high. It has a seating capacity of 600. Three of the windows in this church are memorials, they being to Rev. Mr. Chambers, D. L. Collier and Mrs. S. F. Beatty. A commodious chapel joins the church in the rear, and a comfortable parsonage is the property of the congregation. There have been seven pastors of this church, the first being Dr. Beatty in 1844, and Rev. Wm. P. Breed in 1847, who were followed by Rev. Henry B. Chapin, J. B. Patterson, David R. Campbell, J. A. Worden and W. W. McLane, the last named being still in charge. A mission chapel in the Fifth Ward to which there is attached a flourishing Sunday School is under charge of this congregation.

The former site of the First Presbyterian Church is occupied by the Old Presbyterian congregation, being formed in 1872 primarily by those who desired keeping up an organization south of Market street. Rev. T. V. Milligan was their first pastor, and he was

succeeded by Rev. G. N. Johnson, the present incumbent. The old building left by the First congregation was used until 1877 when a new brick structure was erected, capable of seating 450 persons.

Rev. George Buchanan seems to have been the founder of the United Presbyterian congregation in 1809. He was ordained in 1811, and had charge of the churches at Steubenville, Yellow Creek and Paris, Pa. Services were at first held in the Court House, and afterwards in a schoolhouse on the site of what is now the Christian Church. In 1817 a church was erected on the corner of Fifth and North streets which was replaced by a larger building in 1838, which with an extension made in 1859 is still in use, seating about 400 persons. A good brick parsonage stands on the same lot. Mr. Buchanan was succeeded in the pastorate by Rev. J. K. Andrews in 1857, who in turn was succeeded J. M. Clokey in 1864, T. J. Kennedy in 1870, S. J. Stewart in 1874, and W. S. Owens, the present incumbent in 1877.

The Methodists were also early in the field here, and for several years previous to 1801, when the first society was formed, occasional services had been held. In that year William Lambdin organized what afterwards became Kramer Methodist Episcopal Church, and a lot having been given them by Bezaleel Wells, Esq., a building was erected, which with enlargements stood for fifty years. At that time Steubenville was in the West Wheeling circuit and was connected with the Ohio Conference, which met here in 1813 and also in 1818 It became a station in 1819 with Cornelius Springer the first preacher. Two years after the church was enlarged by adding to it two arms, which made it the shape of the cross, and gave to it the appellation of "The Old Ship." This was at last found unsuitable, and in 1854–5 it was replaced by the structure now standing, although since enlarged and beautified. It is a commodious structure and will seat 500 persons. The successors of Mr. Springer in the pastorate have been Curtis Goddard, John Waterman, James McMahon, Henry B. (afterwards Bishop) Bascom, Wm. Stephens, Joshua Monroe, George Brown, Thomas M. Hudson, Homer J. Clark, Robert Boyd, Charles Thorn, J. C. Merryman, Edward H. Taylor, George L. Holmes, Samuel E. Babcock, L. R. Brockunier, A. M. Brown, C. D. Battelle, Franklyn Moore, M. McCleary, A. H. Thomas, C. A. Holmes. I. C. Pershing, S. P. Wolf, W. A. Davidson, L.

F. Minor, J. J. Higgins, Wm Cooper, E. Hingely, John E. Williams, J. S. Bracken, J. R. Mills and D. C. Osborne, D. D. who still fills the pulpit. A comfortable parsonage stands on the opposite side of the street from the church.

Hamline M. E. Church on the corner of Fourth and North streets, is an offshoot from Kramer, and was built in 1844 at a cost of $5,000. It continued in charge of the old congregation until near the close of 1854, when it became an independent body. Since then it has been greatly improved and a handsome parsonage built. The building will seat 400 people, and the pastors have been Rev. E. G. Nicholson, followed by J. B. Dunlop, A. J. Rich, J. A. Swaney J. D. Cramer, A. L. Petty, S. Baker, D. A. McCready, B. McMahon, E. Barker, T. N. Boyle, S. B. Wolf, H. L. Chapman, J. N. Baker, I. A. Pearce and G. W. Gray.

On Fourth street extension in the Sixth Ward stands Finley Chapel, a neat brick structure, seating some 350 people, which was built in 1868 at a cost of about $4,000. Its pastors have been Revs. J. R. Keys, W. B. Grace, D. H. Snowden, J H. Eky, G. W. Gruber, A Appleton and J M. Bray.

Thomson Chapel in the rolling mill district of the Sixth Ward, is about the same size as Finley and was also erected in 1868. It is a neat frame structure and cost about $3,000. The list of pastors is made up of Revs. W. B. Grace, L. H. Cravens, W. Brown, J. Q. A. Miller, S. W. Stewart, A. J. Lane, and I. K. Rader. A frame mission chapel was erected in the Fifth Ward by this denomination in 1871, but it has never grown into a society.

The Methodist Protestant Church on South Fifth street dates its organization back to 1830, when ninty-three members withdrew from the Methodist Episcopal Church and formed a separate organization under the leadership of Rev. George Brown. A site for a building was purchased, and a building put up at a cost of $4,000, the congregation worshipping meanwhile in the Court House and elsewhere. This building stood until 1853, when a new and larger one, holding nearly 500 persons, took its place, and is still standing. The pastors have been Revs. Robert C. Hutton, E. Woodward, B. W. Johnson, John Elliott, W. W. Arnett, John Burns, J. Dalby, Z. Ragan, E. S. Wayland, Robert Andrew, J. W. Case, J. H. Hamilton, F A. Davis, Wm. Collier, Ambrose Abbott, J. C. Ogle, G. W. Hissey, J. W. Baker, John

Cowl and O. V. W. Chandler. The church has been overhauled and improved the present season, and the society is in a flourishing condition, an excellent choir being one of the features of the organization.

Latimer Chapel located on the corner of Sixth and Slack streets belongs to the Primitive Methodists, who organized a society in 1869, their new building being occupied the following year. It holds about 300 people. Following is the list of pastors since organization: Revs. G. Parker, W. B. Beach, L O. Beach, J. W. Reed, Mr. Batch, R. Fothergill and John Mason. They have no pastor at present.

The colored people have two church organizations in Steubenville. The oldest is known as the African M. E. Church, and organized as early as 1823. A brick church was built on the corner of Third and South streets which stood until 1874 when it was torn down. A new building was proposed to be erected in its place, but the plan was changed and a house and lot purchased on the corner of Fifth and Washington streets, the lower part of which is used for religious services, and the upper for a parsonage. The pastors have been Rev. M. Freeman, Jeremiah Miller, Noah C. Cannon, James Gray, George Bowler, Austin Jones, George Coleman, Turner Roberts, Charleston, Fiatt Davis, George Coleman, Thomas Lawrence, Wm. Newman, Charles Peters, S. H. Thompson, Jeremiah Bowman, Sunrise, John Ridgway, Leaven Gross, Alexander Austin, Nelson Carter, James Stewart, S. H. Thomson, Wm. Ralph, M. M. Smith, S. T. Jones, John Gibbons, S. H. Thompson, (third time) Revs. Ralph, Burrs, Lowry and D. N. Mason.

A separate congregation from the A. M. E. Church was formed in 1876. The following year a frame building seating about 300 people was erected on North Sixth street, which is still in use. The pastors of this congregation have been Revs. Posey, Carr and Bougher, the last named still in charge.

When the first services of the Protestant Episcopal Church were held in Steubenville is uncertain, but at all events seem to have been only at intervals at the first, and afterwards with more regularity by the son of Rt. Rev. Philander Chase, Bishop of Ohio, the young man being then a missionary in these parts. On May 17th, 1819, a meeting was held, and the parish of St. Paul's Church formally organized. Rev. Intrepid Morse was called to

the Rectorship, holding that office until 1865, the long period of forty-six years. He was succeeded by Rev. Charles Gillette, who remained here until 1867 when he removed to New York to accept the position of Secretary of the Freedman's Commission of the Protestant Episcopal Church. The next rector was Rev. Andrew Hull who filled the office from 1868 to 1871 when he resigned to take charge of a church in Vermont. Rev. Thomas D. Pitts succeeded him in March, 1872, and still remains in charge of the congregation, thus making the fourth since the organization of the parish over sixty years ago. In the beginning services were held in the Court House, a room over the old Market House used as a Council chamber, and in the building known as the Academy on South High street. In 1830 steps were taken for the erection of a church, and on July 9th, 1832 the corner stone of a building on the corner of Fourth and Adams streets was laid with appropriate ceremonies, it being consecrated on December 8th, 1833. This building with some enlargements and improvements stood until the spring of the present year, when having become illy adapted to meet the increased needs of the congregation it was torn down to make room for the larger and more elegant structure previously determined on. The corner stone of the latter was laid on May 20th, and it will be ready for occupancy the coming fall. It is a beautiful stone building, low gothic and will make a very decided addition to the architectural attractions of the place. The structure is built throughout of Ohio sandstone, found in the neighborhood, and is the work of home contractors and mechanics. It gives the impression of solidity and bold and striking outlines, and the absence of anything like shams. The building is about 118 feet long with an extreme width of 60 feet 2¼ inches, and a height of 50 feet. The nave is 85¾x43⅔ feet in the clear, and the apsidal chancel 23x26. The tower at the east end measures 122 feet to the top of the cross, and is most symmetrically proportioned. The church is intended to seat 500 persons comfortably, but this can be increased one or two hundred if necessary. It will contain a number of handsome memorial windows, and the font, the gift of Mr. W. L. Archer, is probably the finest piece of stone carving in this section of the country. The parish is also the owner of fine rectory on South Fifth street.

St. Peter's Roman Catholic Congregation was organized about

the year 1832, and under the administration of Rev. Father McCreedy a church was erected on the corner of Fourth and Logan streets during that year, the land being donated by James Ross, of Pittsburgh. Father James Conlan took charge in 1834, and was succeeded by Father J. F. Kearney in 1845, T. O. Farrell in 1847, E. Thienpont in 1850, W. T. Bigelow in 1865, and T. M. Tuomy in 1872, Jeremiah Murray, H. B. Dues, B. Wiseman and M. M. A. Hartnedy, who still remains. A move towards a new building was made in 1853 and on Palm Sunday, 1855 the present building was consecrated, which was enlarged by the addition of 40 feet to its length in 1869. It is now a large and commodious two story brick building 120x45 feet in the clear, and with a seating capacity of 1,000 persons. The house occupied by the sisters of charity adjoins it on the south, and the building is filled on all Sundays and holy days with large and attentive congregations.

The Christian Church on North Fourth street traces its origin back to Alexander Campbell who among his early labors founded a congregation at Steubenville, but the first authentic records of the society are dated in 1841, when the small brick church was built on Dock street between Fourth and Fifth, which was occupied for thirty years when it was sold and the Second Presbyterian Church building on Fourth street above Washington purchased for $8,000, the Presbyterians moving at that time to their new building at the corner of Fourth and Washington streets. The congregation passed through many trials, and cannot be said to have attained a permanency until 1865 when Elder J. White became pastor, and remained in charge for two years, and did a good work which was continued by Elders L. Southmayed, A. Walden, W. H. Blanks and A. H. Carter. The present church will seat about 500 people, and has a baptistery back of the pulpit where the ordinance of baptism can be administered in full view of the congregation.

The German Lutheran Evangelical Church was regularly organized in 1862, services having been previously held in the Presbyterian Churches. A neat brick building capable of seating 300 persons was erected on North Fifth street at a cost of $3,600, a parsonage being added two years later, and the church building itself being improved and enlarged by the addition of an organ gallery in 1870. Rev. George Pfuhl was the first minister,

who served until 1876 when he was succeeded by Rev. Mr. Born, and he in turn by Rev. C. A. Hermann, the present pastor.

St. John's German Lutheran Church was organized in 1876, and occupies Barclay's hall on the corner of Sixth and Market streets as a place of worship. Their pastor is Rev. Theodore P. Ebert.

The First Congregational Church was organized the latter part of the year 1875, and Rev. H. M. Tenney called to the pastorate, who yet labors most acceptably in this field. The first place of worship was in the old Philharmonic Hall on North Fourth street, but since then a hall has been secured on the second floor of the Odd Fellows' Building, and nicely fitted up, being supplied with sufficient chairs to seat 250 people. A nucleus of a building fund for a new church has been formed.

With two or three exceptions all the Steubenville congregations are free of debt, while the standing of clergy both intellectually and morally is and has been high. All of the congregations have attached to them Sunday Schools of larger or smaller proportions, and other machinery for evangelical work.

# Public Buildings, Grounds, &c.

We shall include in the above not only the work of the people in their corporate capacity of city and county but also the work of what may be termed semi-public corporations, such as Odd Fellows and the Union Seminary Association. First and foremost of our public buildings of course stands the Court House, the pride of citizens and the admiration of strangers. Its erection was begun in 1870 and concluded in 1874, the whole series of county buildings with additional ground purchased costing about $300,000, a very moderate sum considering the times and the character of the buildings. The structure, a cut of which may be seen on the fourth page of the cover, stands on an open space of ground on the corner of Market and Third streets. It is fire proof throughout and is built of Northern Ohio sandstone, presenting a front of 126 feet on Market and 96⅔ feet on Third street. The basement contains the Coroner's office, two furnace rooms and law offices. The first floor has two rooms for the

Recorder, two for the County Auditor and Commissioners, one for the Treasurer, one lumber room, and two for the Probate Judge. The height of this story is 16 feet 6 inches. On the second floor is the Court Room, measuring 50 by 70 feet, and 40 feet in height, one room for the Prosecuting Attorney, one for Sheriff, two for the Clerk, one consultation room, witness and the Judge's room. These rooms all average 20 by 24 feet, and are all provided with wardrobes, washrooms, and water closets. The height of this story is 15 feet 6 inches. On the third floor are two library rooms, three jury rooms, and two extra rooms, averaging 24 by 32 feet. This story is also 15 feet 6 inches high. The building is heated by hot air, and supplied with grates in addition. The height of the main building from base to the roof of Court House is 70 feet. Above the roof extends a tower, the height of which, from base to top of cornice, is 49 feet, from top of cornice to roof of tower 32 feet, making the actual height of tower 81 feet, and the total height of building from base to top of tower, 151 feet. In the center of the tower is a clock with illuminated dials 8 feet in diameter. A dial in the Court Room also indicates time from the same clock. The Court Room itself is of course a main feature of the building and contains some fine work in fresco, a life-size portrait of the late Hon. Edwin M. Stanton, one of Steubenville's most honored sons, gracing the rear wall, and portraits of Washington, Lincoln, the great seal of the State and other symbolical emblems ornamenting the curve of the ceiling, the whole being crowned with a sky-light of stained glass. These frescoes are worth a study, and fully deserving the attention of the visitor. The adaptability of the Court House not only for the purpose for which it was built but for other objects has been well illustrated the past year by the public conventions which have been held there, and the Loan Exhibition which lately closed one of the most complete and successful entertainments of the kind in the country. The building is conceded to be the finest of its kind in the State. Directly north of the Court House and connected with it by a covered passage way are the Sheriff's dwelling and jail, the former fronting on Third street and built of red pressed brick with stone trimmings. It contains ten rooms with halls, closets and other conveniences. At its rear stands the jail, a two-story building of Steubenville brick and stone trimmings. It contains three tiers of cells made of

boiler iron, 27 on the north side for males and 9 on the opposite side for females. Each tier has a corridor guarded by an iron lattice, and the building is also supplied with sick room, bath room, execution room and everything necessary to the successful working of the institution.

A prominent building on North Fourth street is the new Odd Fellows' Hall, also used as a Postoffice building, which was completed in 1872, at a cost of $12,000, without the ground It is a handsome three story brick building, with stone trimmings. The upper story is used by the Order as a Lodge room, and contains a main hall 72½x34 feet, and 17 feet high, with proper anterooms. The second floor is occupied by First Congregational Church as already intimated, and on the ground floor is the Postoffice 17x72½ feet and 14 feet high, with all mail facilities The receipts at this office reach about $11,000 per annum.

The Mayor's office occupies a two-story brick building on the south side of the public square, where two good sized rooms are devoted to the uses of that department, the first floor being fitted up for a city prison, and for the Phœnix fire company. The Reliance fire company occupy a similar building on North street, which will be referred to elsewhere.

Market street, the main thoroughfare, is paved from end to end, a levee built of blocks of sandstone projecting into the river at its foot, and a similar one at the foot of Washington street. A block of locust pavement is laid on Fourth street, while slag from the blast furnaces has been used with considerable success in making solid streets elsewhere. Shade trees line nearly all the streets, adding to comfort and beauty. The city is exceptionally well provided with well paved sidewalks, brick being the material generally used, and with solid stone crossings and covered stone culverts in many cases pedestrians can go from one end of the town to the other in any kind of weather, without annoyance from mud and water. The streets are well lighted at night by gas in the central parts and oil in the suburbs. The houses are numbered on the Philadelphia plan of 100 for each block.

The open grounds belonging to the city have as yet been but little improved, but the trees planted a short time since on the river side give promise of a nice little park of several acres in a few years, and the square in the centre of town, formerly occupied by the Market House, only awaits the hand of taste to make

it a pleasant resort. The city also has some open ground adjoining the reservoir which will probably be utilized some day in a similar manner.

Probably no better test of the refinement and standing of any community could be afforded than in its manner of caring for the dead, and any stranger passing through our city will find it time well spent to pay a visit to the Union Cemetery in the western part of the town. It was first laid out in 1854, and originally consisting of fifty acres it has grown with successive additions until now it embraces a territory of 147 acres, of level, hill and valley, with romantic and varied scenery, views of quiet landscapes and rugged wilds, a most fitting place for the abode of the remains of the loved ones gone before. There are two entrances about a mile and a quarter apart, with handsome gateways of stone and iron, and lodge houses adjoining, erected through the liberality of Dr. C. C. Beatty. A prominent landmark in the Cemetery is the Soldiers' monument completed in 1870 at a cost of $8,000. It is a beautiful corinthian column of white marble surmounted by a flying eagle, while at the base stand life size statues of a soldier and a sailor. Emblems of war and names of the fields upon which Jefferson county soldiers bled and died are found on the sides. It is superb in design and execution, and no one who visits the cemetery should fail to make a close examination of it. There are other fine artistic works here well worthy of attention, and a half day spent among the miles of walks and drives of this beautiful spot will fully repay even the hurried traveler.

St. Peter's Roman Catholic Church has a separate cemetery on the Market street extension before reaching the Union Cemetery.

## Water and Fire Departments.

It is said that Steubenville has the best water works on the river between Pittsburgh and Cincinnati, and it is more than likely that a comparison would prove the statement true. Certain it is that they are of sufficient capacity to provide a practically illimitable supply of pure water from the Ohio river, which having seventy miles of a flow from Pittsburgh without the drainage of any large towns has abundant opportunity to free itself from any

organic or other matter in solution, and to be in excellent condition for drinking and all domestic uses. In the early days the town was supplied with water from springs on the west side through wooden pipes, but in 1835 the construction of a regular water works was begun at the foot of Adams street, to give a supply from the river, and they were put in operation the following year. The reservoir located about half way up the hill at the head of Adams street was three-quarters of a mile from the works, holding 400,000 gallons and 192 feet perpendicular height above the pumps, the water was driven through an eight inch pipe with an engine of 40 horse power, capable with the other machinery of forcing 200,000 gallons into the reservoir each ten hours. Afterwards another and larger basin was constructed west of the former, holding 600,000 gallons, thus giving a total capacity of 1,000,000 gallons. By this time the old machinery was becoming worn out, and besides the small capacity of engines, pumps and pipes was proving insufficient for the growing size of the town. In 1864 a radical improvement was decided upon. The old building was increased to twice the original size, and a pair of new and larger engines and pumps put in, a 20-inch main laid to the reservoir, the work being completed in 1867, at a cost of $50,000. The machinery now consists of two batteries of two and three boilers respectively, two steam engines of 150 horse-power each, the newest and best being made at the establishment of James Means & Co., in this city, two sets of pumps and the other accompanying machinery. Everything, under the charge of the Superintendent, Johnson Irwin, is in tip top order, and it is a remarkable fact that the city has not been without a full water supply in every part through the fault of anything at the works for twelve years. In fact such a thing as a water famine in our community is unknown in these days. The full capacity of the two engines and pumps combined for forcing water into the reservoir is at the rate of 2,480,000 gallons every twenty-four hours The actual consumption averages 1,280,000 gallons each twenty-four hours, keeping the works running about ten hours a day, or the work of one engine for eighteen hours. Water is distributed through the city first by a 20-inch main running north and south on Seventh street in the high part of the town, from which an 8-inch pipe extends down Market street to the river, and 6-inch pipes on the other east and west streets, the laterals con-

necting being usually 4-inches. There are now upwards of fifteen miles of pipe laid in the city, of which 2,600 feet are 20-inch, and the balance 8-inch, 6-inch, 4-inch and a little 2-inch. The latter are only laid in localities where a limited supply of water is needed, and are gradually being replaced by pipe of larger sizes. The city contains 125 fire plugs for the steamers, and 1725 private consumers registered with considerably above that number of hydrants. The water tax is an individual matter, and only those are compelled to pay it who choose to make use of the water. The force of water in the central portions of the city is sufficient to send a plug stream to the cornice of a three-story building, a very important matter in time of a fire. The original cost of the works and the radical improvements of 1864–7 have all been paid for, the only bonds outstanding being less than $6,000 for extension of the mains, of which fuller particulars are given farther on.

The fire Department, which is closely connected with that of water supply, is also in a high state of efficiency. The last annual report of the Department showed the apparatus to be in good condition and to consist of two steamers, 2 hose carriages, 3 hose trucks, 1 hook and ladder truck, &c. The hose on hand and in use consists of 1,000 feet of new gum and leather hose, 2½ inch; 2,000 feet old gum hose, and 250 feet of 2¼ inch gum hose. The force of the Department is 1 Chief and 2 Assistant Directors; 2 engine and hose companies, and 1 hook and ladder company, 22 men in each, all under charge of experienced officers and in first-class working order. The Phœnix company occupies the same building that is used for the Mayor's offices already referred to; the Star Hook and Ladder Company using the one adjoining. The Reliance Company occupies a two-story brick building on North street, which is furnished with all necessary conveniences. The Department is conducted on the volunteer plan, although the Chief Fire Director and Engineers of the steamers receive small salaries, and the members of the companies each receive the sum of $10 per annum with other privileges. Alarms are given from the bells on the engine houses as well as by a fire alarm attached to the Court House bell, which notifies the whole city instantly.

During last year there were 12 fires and 4 false alarms, with a total loss of $5,050, on which there was an insurance of $2,950,

making the actual loss $2,100. During the present year, which is now more than half gone, not a single dollar has been lost by fire, and as a result of this exemption from the devouring element, insurance is very low, being down to one-fifth of one per cent. on first-class risks.

# City Finances.

It is generally the case that where a city or county is found provided with public buildings, water works, railway communications, &c., that there is a large municipal debt with a heavy interest burden, and consequent heavy taxation. A late magazine writer who has figured up the municipal debts of 130 cities of the country shows that there has been in the ten years from 1866 to 1876 the enormous increase of $423,066,624, and in Ohio alone the municipal, county and township debts have increased from $17,550,497.97 in 1872, to $39,328,569.10 in 1878. It seems to have been the practice generally to go on borrowing as long as people would lend, until the burden became so heavy as not only to prevent further progress in that direction, but to make it very difficult to carry the burden already incurred. Thanks, however, to the wise foresight displayed by those who have had control of affairs, Steubenville and Jefferson county present a marked exception to this rule, and the indebtedness which was at one time quite heavy, has been steadily reduced, and in fact as to the county it has been entirely wiped out, leaving only a trifling city and township debt, the former being $35,888.15, divided as follows:

| | | | | | |
|---|---|---|---|---|---|
| Water Works bonds, due | | | | June 1, 1880, | $1000 00 |
| " | " | " | " | August 1, " | 4000 00 |
| " | " | " | " | June 1, 1881, | 888 15 |
| Railroad | | " | " | July 1, " | 5000 00 |
| " | | " | " | " 1, 1882, | 5000 00 |
| " | | " | " | " 1, 1883, | 5000 00 |
| " | | " | " | " 1, 1884, | 5000 00 |
| " | | " | " | " 1, 1885, | 5000 00 |
| " | | " | " | " 1, 1886, | 5000 00 |
| Total, . . . . | | | | | $35,888 15 |

Of the above amount the bonds falling due in 1880 are already provided for by the tax levy of the present year, leaving less than

$31,000 to be provided for by additional taxation. As the city duplicate last year footed up $5,344,420, it will be seen that the burden is exceedingly light. All of the railroad bonds in the above table bear interest at six per cent., and the water works bonds at eight, and such has been the desirability of Steubenville city bonds as an investment that they have for years been held at a premium. The debt is lower now than it has been for twenty-seven years, and is in rapid process of extinguishment. The assets of the municipality as such would far more than pay off the debt to-day.

In addition to the above there is an old township railroad debt of about $7,000, all of which is provided for by the present tax levy, so that it can be counted out. There are also outstanding $6,000 of school bonds which are provided for.

As a result of this state of affairs the rate of taxation has undergone a steady reduction with the reduction of the debt, and last year the total for State, County, Township, School and City purposes, footed up 17.6 mills on the dollar valuation, a smaller figure than any other city of the size in the State. This year it is still lower, the levy for the various objects being as follows :

| | | |
|---|---|---|
| State taxes, | 2.9 | mills. |
| County " | 2 1 | " |
| Township " (in city) | 1.6 | " |
| School " | 4. | " |
| City " | 6. | " |
| Total, | 16.6 | " |

The steady reduction of the debt towards extinguishment gives promise of a still further reduction of taxation in coming years, and with an economical administration of the city government such as we have had in the past the figure doubtless can at no distant date be brought down to 15 mills on the dollar, which cannot fail to tell heavily in favor of this city as a location for manufactories and other enterprises involving valuable property.

Following were the disbursements in the different departments of the city goverment for the year ending March 1, 1879 :

| | Total Paid out. | Balance March 1, 1879. |
|---|---|---|
| Railroad Bonds and Interest, | $ 1,800 | $ 1,511.29 |
| Fire Department, | 3,228.66 | 1,610.79 |
| General and Incidental Expenses, | 3,069.22 | 3,060.95 |
| Hay Scales, | 183.94 | 376.43 |
| Market House, | 315.51 | 208.51* |
| Marshal and Police, | 7,811.87 | 1,540.38 |
| Public Lamps, | 4,603.67 | 2,624.95 |
| Mears Relief Fund, | 784.56 | 269.46 |
| Streets and Alleys, | 11,156.44 | 4,672.04 |
| Sinking Fund, | 4,000.00 | 4,377.94 |
| Fourth Street Improvement, | 02 | 02 |
| Bridges, | 493.34 | 417.78 |
| Wharfage, | 332.01 | 230.51 |
| Water Works Bonds, | 1,111.05 | 1,191.04 |
| Improvement Water Main, | 5,155.61 | 1,282.78 |
| TOTAL, | $44,045.70 | $22,877.73 |

*Overdrawn.

Deducting the amount for improvement of water main and reduction of debt we have $31,979 as the amount of all ordinary expenditures, including street improvements, &c., which were unusually heavy last year. The Mears Fund is not raised by taxation, but is the interest on a legacy left by a deceased citizen, which is expended to aid the worthy poor.

# Sanitary and Climate.

Good health is conceded to be the first requisite to the enjoyment of life, and as a healthy city Steubenville has few if any superiors. The place being elevated from the river, with a good slope towards it, the drainage is excellent in every direction, and in no part of the town is there stagnant water or marshes arising from natural causes. The hills, enclosing the city on all sides, break the force of the winds, and the soil being mostly gravel is not easily contaminated with impurities. Surface drainage is depended on, and such is the position of the town that every hard rain washes it from one end to the other, clearing away all refuse which human scavengers have neglected. Malarial fevers are unknown, and it is the testimony of physicians whose experience has extended over other places as well as this, that Steubenville is the healthiest town in which they have practiced. The most prominent disease of the place is consumption, but even this does not furnish enough cases to impair the favorable health ratio. The death rate of any city is the crucial test of its health, and in this connection the following figures as returned by the Ward Assessors this season as the number of births and deaths in the year just closed will be of interest :

| | Births. | Deaths. |
|---|---|---|
| First Ward, | 32 | 11 |
| Second " | 73 | 20 |
| Third " | 58 | 22 |
| Fourth " | 28 | 21 |
| Fifth " | 43 | 9 |
| Sixth " | 30 | 11 |
| Total, | 264 | 94 |

It will be noticed that the ratio of births to deaths is nearly three to one, while the death rate in the thousand, basing the population at 14,000 people, is only 6.71, or allowing 41 per cent. for deficits as is done in the United States census reports, it would still be only 9.43. When it is considered that the death rate of the principal cities of the country ranges from 15 to 38.3 in the 1,000, even leaving out those places which are specially subject to yellow fever and other epidemics, it will be seen that the rate is exceptionally low. Hence, while the citizens would doubtless extend a cordial welcome to physicians as well as others locating in their midst, they cannot be advised to emigrate hither in the expectation of amassing an immediate fortune from their patients.

# Real Estate and Rents.

Good building sites for manufactories, with railroad and river fronts, abound, and are to be had on favorable terms. We do not give prices as they are constantly fluctuating, but any information on that point will be gladly supplied by the committee having charge of this pamphlet, and parties writing to them will receive a prompt answer. The sites for dwellings are also plentiful and desirable, and lots in the newer portions of the city especially, are to be had at low prices and easy payments. Most of the dwellings have been erected for occupancy by their own proprietors, and consequently wear an air of home comfort which is a distinguishing feature of the place. The evils of the tenement house system have never been felt here, and the successful endeavors of all classes of our people to obtain homes of their own have had much to do with the conservative character of the population.

The fact of so many owning their own homes has also had the effect of keeping down the price of rents for such dwellings as are in the market. A comfortable house can be had for $5 per month, while for $20 one of superior comforts and elegancies can be obtained. The value of real estate here in the future is evidently destined to increase, as the indications point that way, thus affording a safe and remunerative form of investment.

# STEUBENVILLE.

SKETCH OF

MANUFACTURING,

# Educational and other Institutions.

ITS ADVANTAGES FOR

BUSINESS OR RESIDENCE.

PUBLISHED BY DIRECTION OF THE CITY COUNCIL.

ALBERT F. MATLACK, -
R. L. BROWNLEE, - -
GEO. W. ALBAN, - - -
} *Committee.*

COMPILED BY

JOSEPH B. DOYLE.

STEUBENVILLE:
PRINTED AT STEUBENVILLE HERALD BOOK AND JOB PRINTING HOUSE,
1879.